

AMENDMENTS TO THE DRAWINGS:

The attached sheets of drawings includes a change to Figure 1 to add the "RELATED ART" label, as required by the Examiner.

Attachments: 1 Replacement Sheet
1 Annotated Sheet Showing Change

REMARKS

Attached herewith is an Excess Claims Fee letter and fee.

Claims 1-23 are all the claims presently pending in the application. Claims 1 and 15 have been amended to more particularly define the invention, and claims 3, 4, 11, and 14 are amended to reflect preference of local practice. Claims 21-23 have been added.

New claims 21-22 are modifications of original claims 1 and 15, respectively.

Support for new claim 23 is provided in paragraphs 4 and 5 of page 5 of the specification, wherein the fixing element of the claim derives from the statements: "The spacer 9 firmly supports the front display unit 5 by means of a fixing agent or device such as an adhesive." and "The rear display unit 10 secured to the spacer 9 by a suitable fixing agent or device." Applicants believe that this fixing element feature of the present invention clearly distinguishes from the "sealing material 3" of primary reference Hattori.

It is noted that the claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicant specifically states that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claim 15 stands rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,912,649 to Hattori et al. Claims 1, 2, and 7-10 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Hattori, further in view of US Patent No. 5,929,562 to Pichler. Claim 3 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Hattori/Pichler, further in view of US Patent No. 4,829,213 to Pecile et al. Claims 4 and 11 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Hattori/Pichler, further in view of US Patent No. 4,396,864 to Suntola et al. Claims 5 and 13 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Hattori/Pichler, further in view of US Patent No. 6,969,948 to Urabe et al. Claim 6 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Hattori/Pichler, further in view of US Patent No. 5,983,831 to Kleinberger et al. Claim 12 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Hattori/Pichler, further in view of US Patent No. 4,719,385 to Burrow et al. Claim 14 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Hattori/Pichler, further in view of US Patent No. 4,945,009 to Taguchi et al. Claims 16-20 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Hattori, further in view of Urabe.

These rejections are respectfully traversed in the following discussion.

I. THE CLAIMED INVENTION

The claimed invention, as exemplarily described in independent claim 1, is directed to a three-dimensional image displaying apparatus including a front display unit having at least one transparent display screen, the at least one transparent display screen including a plurality of organic electroluminescent elements and a rear display unit located behind the front display unit and having a display screen. The three-dimensional image results from selectively applying a difference in brightness of selected pixels of the front display unit and the rear display unit. A spacer is connected between the front display unit and the rear display unit. The spacer provides a stability for the three-dimensional image when the three-dimensional image displaying apparatus receives an impact shock.

As explained in the third full paragraph on page 2 of the specification, conventional three-dimensional image devices such as shown in Figure 1 are subject to distortion if the device receives an impact shock.

The claimed invention, on the other hand, uses a spacer that reduces or prevents this distortion after the device receives an impact shock. The prior art of record fails to teach or suggest this combination of elements.

II. THE PRIOR ART REJECTIONS

The Examiner alleges that Hattori teaches the claimed invention described by claim 15 and renders obvious claims 16-20, and, when modified by Pichler, renders obvious claims 1, 2, and 7-10, when further modified by Pecile, render obvious claim 3, when further modified by Suntola, renders obvious claims 4 and 11, when further modified by Urabe, renders obvious claims 5 and 13, when further modified by Kleinberger, renders obvious claim 6, when further modified by Barrow, renders obvious claim 12, when further modified by Taguchi, renders obvious claim 14.

Applicants respectfully disagree and submit that there are elements of the claimed invention which are neither taught nor suggested by Hattori because of its different principle of operation.

That is, although Hattori's apparatus has front and rear display units 10, 20, separated by a "sealing material" 3, the principle of operation in this apparatus is that of forming two kinds of images: a real image (due to the light directly emitted to the viewer) and a virtual

image (due to the reflected light). As described in lines 31-34 of column 1, the perception of depth is due to the virtual image. Therefore, the sealing material 3 in the Hattori apparatus, has no effect on the stability of the three-dimensional image when the apparatus receives an impact shock. Moreover, there is no suggestion in Hattori that the “sealing material” 3 of Hattori would even preserve the separation of the two panels during or after impact shocks. Therefore, there is no suggestion in Hattori that this sealing material even corresponds to the spacer of the present invention, even if the three-dimensional image were to be due to the real images.

In contrast, the three-dimensional image of the apparatus of the present invention results from a difference in brightness between the images on the front/rear displays, an entirely different concept of forming a three-dimensional effect. The purpose of the spacer is to securely maintain the separation of the two panels even during impact shocks to the apparatus.

The Examiner relies upon the secondary references for purposes other than overcoming these basic deficiencies in Hattori, so that the modifications of Hattori by these secondary references, even if proper, would still fail to result in the combination of the claimed invention.

Hence, turning to the clear language of the claims, in Hattori there is no teaching or suggestion of: “... the three-dimensional image due to selectively applying a difference in brightness of selected pixels of the front display unit and the rear display unit; ... the spacer providing a stability for the three-dimensional image when the three-dimensional image displaying apparatus receives an impact shock”, as required by independent claim 15. Independent claim 1 has similar language.

Therefore, Applicant submits that there are elements of the claimed invention that are not taught or suggest by Hattori and that all claims are clearly patentable over Hattori. Therefore, the Examiner is respectfully requested to withdraw these rejections.

Further, Applicant submits that the Examiner can point to no reasonable motivation or suggestion in the references themselves that urge the combination as alleged by the Examiner in the rejections. Indeed, the Examiner alleges that all secondary references are analogous art to Hattori, when, clearly, these secondary references are directed to different problems, basic architecture, and principles of operation from those of Hattori. Merely sharing the characteristic that these references are “... from the same field of endeavor namely multi-unit electro-luminescent displays” is insufficient, as can be clearly seen by comparing the range of

different architectures and principles of the different cited references.

More specifically, relative to secondary reference Pichler, Applicants submit that this reference teaches a single display device having respective layers for each color, a concept quite different from that of Hattori's architecture in which two different devices face each other for purpose of utilizing reflections to be used in forming the virtual image. There is no indication that the device of Pichler would perform in the manner required by Hattori.

Applicants also submit that there is no evidence of record to support the Examiner's allegation that the organic EL elements of Pichler would be any cheaper than the elements of Hattori. Since the Examiner is understood as having invoked Official Notice, Applicants respectfully request that the Examiner provide of record a properly combinable reference that supports the Examiner's comparison of costs.

Secondary reference Urabe has the same problem as Pichler, in that the Examiner points to no suggestion in Urabe that its organic EL device would be any less costly than the EL device of primary reference Hattori.

Relative to secondary reference Pecile, Applicants first submit that the spacer 20 is not cylindrical, as can be clearly seen in the cross-sectional view in Figure 3 and the perspective view of Figure 2. Moreover, Applicants submit that the spacer 20 of Pecile is no more simple than the spacer of primary reference Hattori. Finally, Applicants submit that the spacer of Pecile would not serve the purpose of the spacer in Hattori, since it clearly lacks the width required for spacing as needed for Hattori.

Relative to secondary reference Suntola, relied upon for its light filter layer 5, Applicants submit that the fabrication process described in lines 54-62 of column 2 of Suntola is clearly no simpler than the insertion of silicon oil.

Relative to secondary reference Urabe, Applicants submit that the antireflection layer is not on a spacer separating front and rear display panels. Rather, it is on the sealing substrate.

Relative to secondary reference Kleinberger, Applicants submit that the principle of operation to form the three-dimensional image is entirely different from that the reflection technique of primary reference Hattori and, therefore, not properly combinable.

Relative to secondary reference Barrow, Applicants submit that primary reference Hattori already has a mechanism to maintain the panels at the close predetermined proximity. Therefore, the motivation currently of record is merely a circular argument that provides no reasonable motivation to modify the spacer of Hattori to be poles.

III. FORMAL MATTERS AND CONCLUSION

Applicants submit a revised drawing for Figure 1, wherein is added the "RELATED ART" label, as requested by the Examiner.

In view of the foregoing, Applicant submit that claims 1-23, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

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FIG. 1 (RELATED ART)

